

REMARKS

Claims 22-57 are cancelled. Claims 58-65 are added. Claims 1-21 and 58-65 are in the application for consideration.

Applicant's claims stand rejected as being obvious over a combination of U.S. Publication 2003/0232511 to Metzner et al. in view of U.S. Patent No. 4,949,671 to Davis et al. Applicant disagrees and requests reconsideration.

The Examiner asserts at page 3 of the Office Action that Metzner et al. teaches deposition chamber temperatures as required by the present claims in Metzner's Fig. 6. This is in error. Apparently, Fig. 6 in Metzner et al. plots resistance of "W" as a function of temperature. The undersigned interprets the reference to "W" to be with respect to elemental tungsten. Tungsten and the element "W" is nowhere found in the Metzner et al. document. Metzner et al.'s Fig. 6 is not seen to be material to any other textual material within Metzner et al. Paragraph [0017] in Metzner et al. describes a different Fig. 6 than that appearing in the Metzner et al. publication. Therefore, the only reasonable conclusion is that Fig. 6 is immaterial to the text of the Metzner et al. publication, and the "temperature" referred to is clearly not referring to, nor is it material to, ozone temperature in the manner which the Examiner asserts. Accordingly, the Examiner is mistaken that Metzner et al. teaches "deposition chamber temperatures" as required by Applicant's independent claim 1, or other claims.

Similarly, the Examiner asserts that Metzner et al. discloses a heated chamber lid as required by Applicant's claims 8-12 at Metzner et al. page 2, paragraph [0023], and in Metzner et al.'s Fig. 3. However, paragraph [0023] refers to a Fig. 3 apparently not appearing in the Metzner et al. publication, at least for the reason that numerical designations are made relative to components not shown in Fig. 3 (nor even in Fig. 1) of the Metzner et al. publication.

Accordingly, the Examiner's reliance upon Metzner et al. is in error for the reasons stated above, and regardless, the undersigned agrees that Metzner et al. in no way discloses anything about ozone temperature where it is emitted into a deposition chamber.

The Examiner also asserts that Davis et al. discloses that a remote plasma chamber should be kept at the same temperature as the deposition chamber, relying upon col.24, Ins.45-60. Applicant disagrees and requests reconsideration.

The particular language upon which the Examiner relies is understood to be: "The chamber should be maintained at deposition temperature." However, the "chamber" referred to in the immediately preceding two occurrences is the deposition chamber or process chamber 218 and not the remote plasma chamber 254. Further, the immediately preceding sentence to that sentence in Davis et al. upon which the Examiner apparently relies refers to an occurrence when remote plasma is not utilized. Therefore, even if the sentence upon which the Examiner relies refers to remote plasma

operation, such is apparently referring to an operation wherein remote plasma is not generated, and thus ozone would not be produced, according to the Examiner's apparent application of this reference to the teaching of Metzner et al. Consequently, the Examiner's reliance upon Davis et al. is in error at least for this reason, and accordingly, whether taken alone or in combination with Metzner et al. as asserted above, does not suggest Applicant's independent claim 1. Further, the remote plasma generator found at col.32, ln.50 – col.33, ln.33, and col.33, lns.2-3, refers to the use of cooling. Additionally, even if the chamber referred to by Davis et al. in the sentence upon which the Examiner relies is the remote plasma chamber, there is absolutely no suggestion whatsoever that any O₃ there generated would be at a temperature of at least 170°C at a location where it is emitted into the deposition chamber, as Applicant recites in independent claim 1.

For at least the foregoing reasons, the Examiner's rejection of Applicant's independent claim 1 over a combination of Metzner et al. in view of Davis et al. is in error and should be withdrawn. Action to that end is requested.

Applicant's dependent claims 58-65 are added and are supported by Applicant's application as initially filed. For example, Applicant's application refers to a chamber lid, and the drawings depict a conduit joining to the deposition chamber at a chamber lid, for example as cited in claim 58. Claims 59-61 are supported in Applicant's application as-filed in paragraph [0026]. For example, claim 60 recites heating the conduit with an external

heater received one foot from the chamber lid. The last sentence of paragraph [0026] recites that in one implementation the conduit is void of any external heat source at a location from where it enters the chamber to no greater than one foot upstream from the chamber. Accordingly, such effectively recites a range of from where the conduit joins to the chamber up to one foot wherein no external heat source exists but thereby requires an external heat source starting at least/no greater than one foot upstream from where it joins the chamber. Therefore, such disclosure effectively recites a range of connection of a heater to such conduit anywhere from immediately at the location where the conduit joins with the deposition chamber up to one foot. Accordingly, claim 61 is also inherently supported from such disclosure.

Applicant's dependent claim 62 is supported, at least from the drawings as shown and the problem which motivated the invention, as described in paragraph [0023].

Regarding Applicant's dependent claims 64 and 65, claim 64 is supported by Applicant's Fig. 2, and claim 65 is supported by Applicant's Fig. 1.

Each of Applicant's dependent claims should be allowed as depending from allowable base claims, and for their own recited features which are neither shown nor suggested in the cited art. Further and for example, the undersigned asserts that the Examiner has not met the required *prima facie* obviousness burden in rejecting Applicant's claims, at least for the reasons

argued above. However, even if the Examiner's assertions were correct, the Examiner's Office Action in no way conceivably establishes *prima facie* obviousness in Applicant's dependent claims 14-21.

This application is believed to be in immediate condition for allowance, and action to that end is requested.

Respectfully submitted,

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By: 

Mark S. Matkin
Reg. No. 32,268